

FIG. 1

One shot
FIG. 2

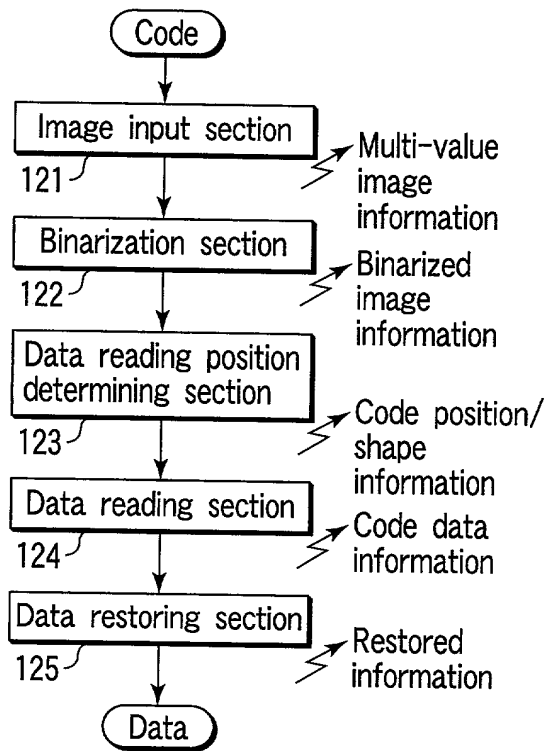


FIG. 3

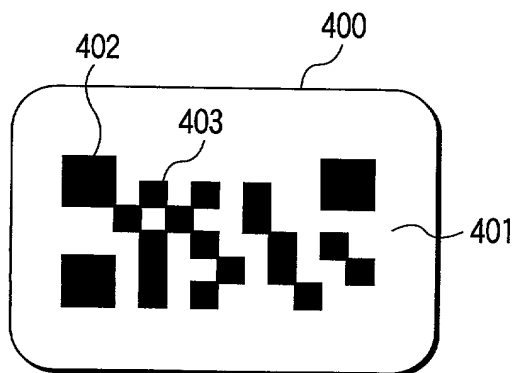


FIG. 4

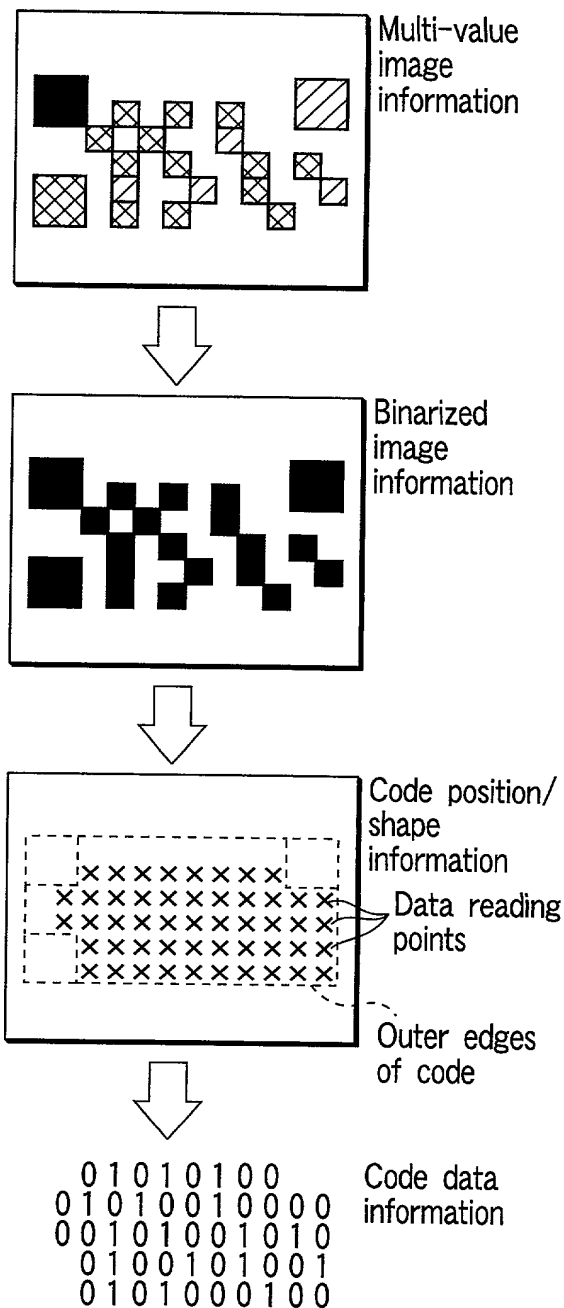
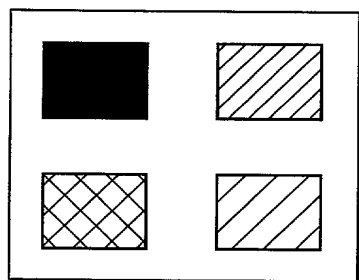
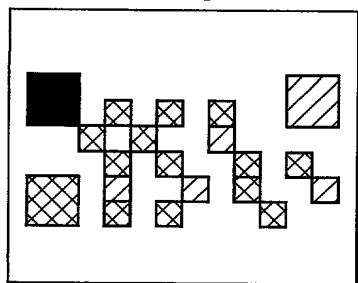


FIG. 5

Multi-value image information



Average brightness of predetermined region

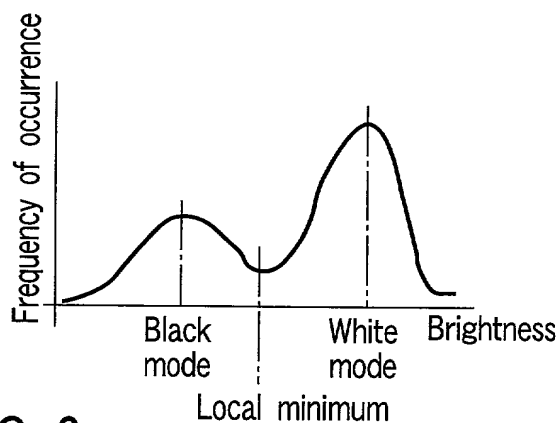
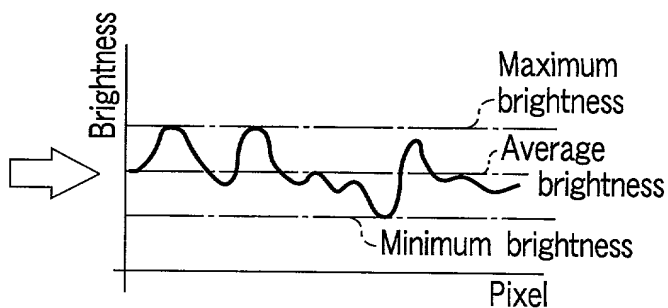
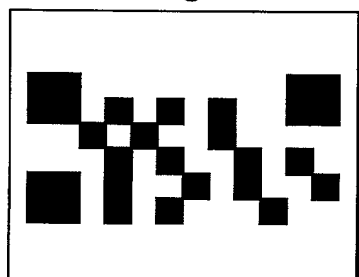


FIG. 6

Binarized image information



Black : 55	Black : 30
White : 45	White : 70
Black : 50	Black : 40
White : 50	White : 60

Pixel distribution in predetermined region

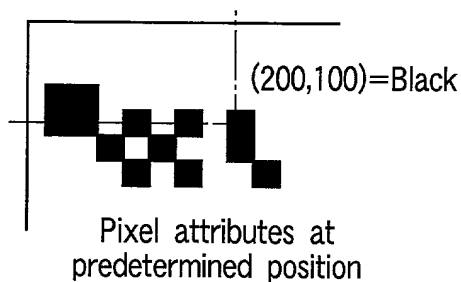
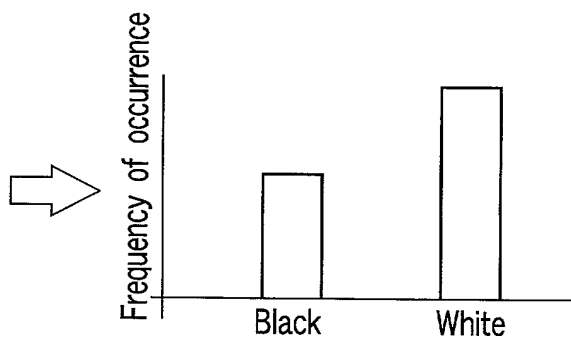


FIG. 7

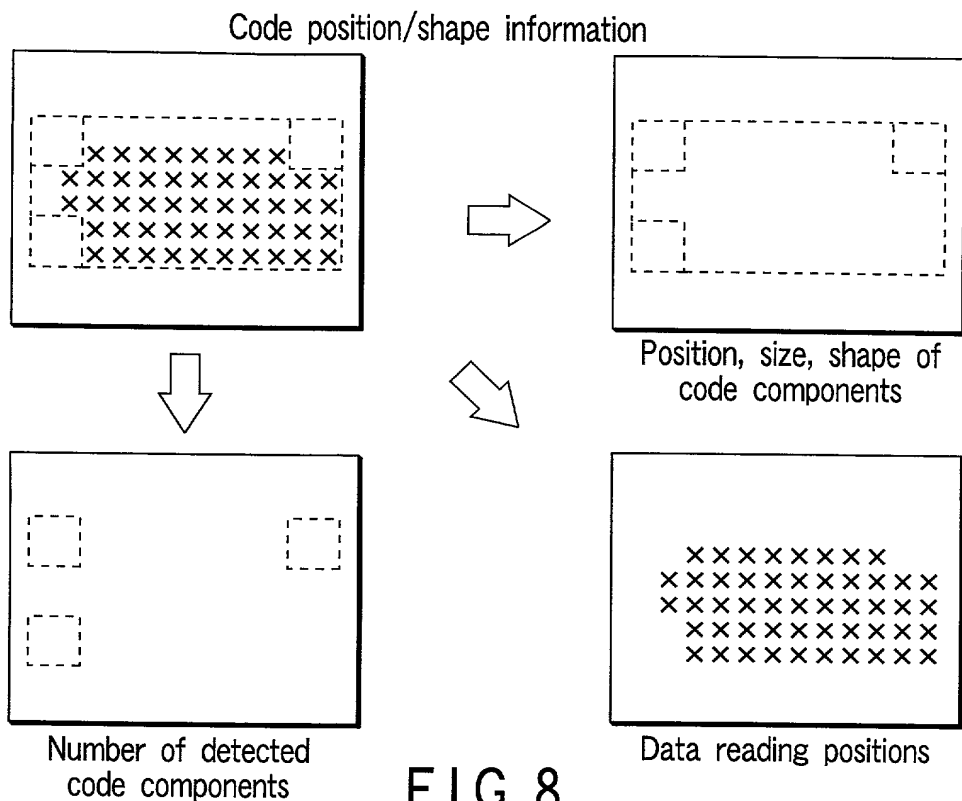


FIG. 8

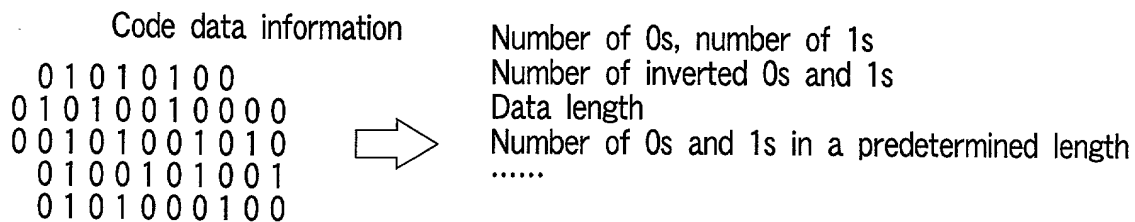


FIG. 9

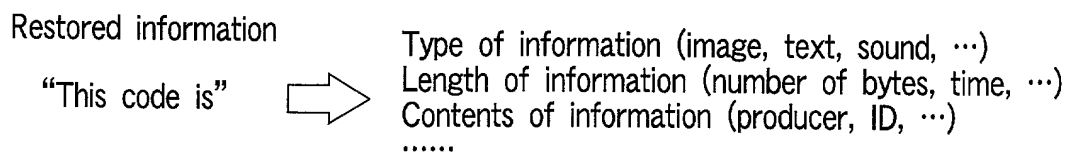


FIG. 10

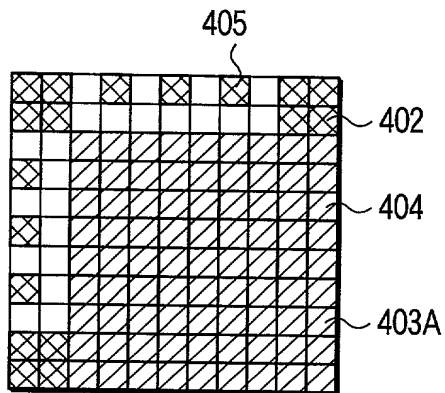


FIG. 11
PRIOR ART

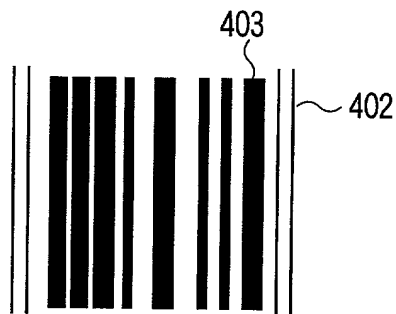


FIG. 12
PRIOR ART

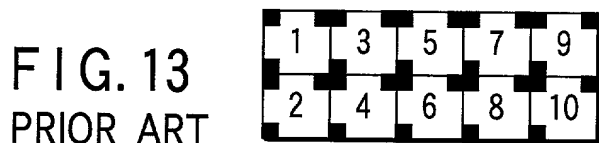


FIG. 13
PRIOR ART

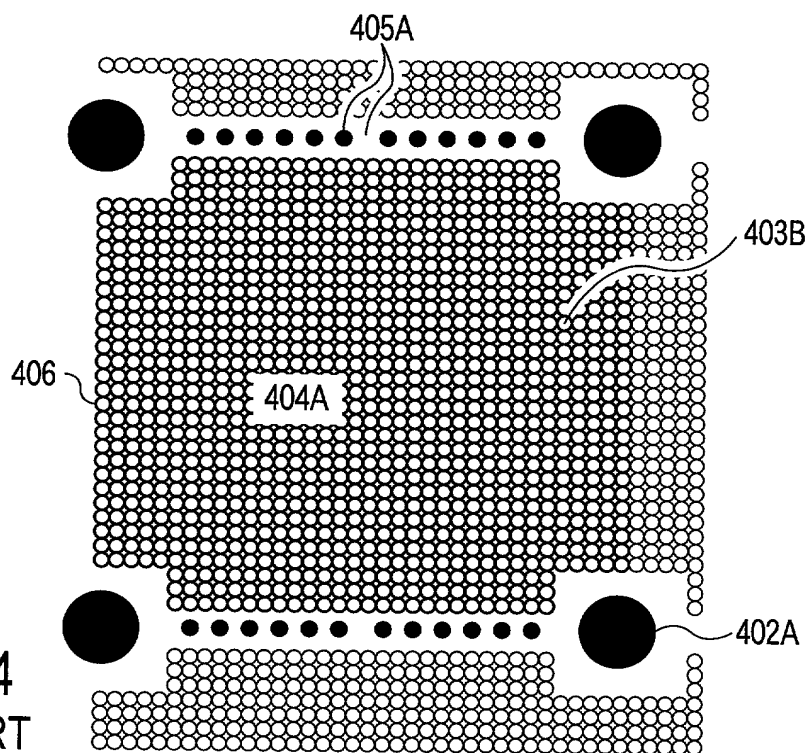


FIG. 14
PRIOR ART

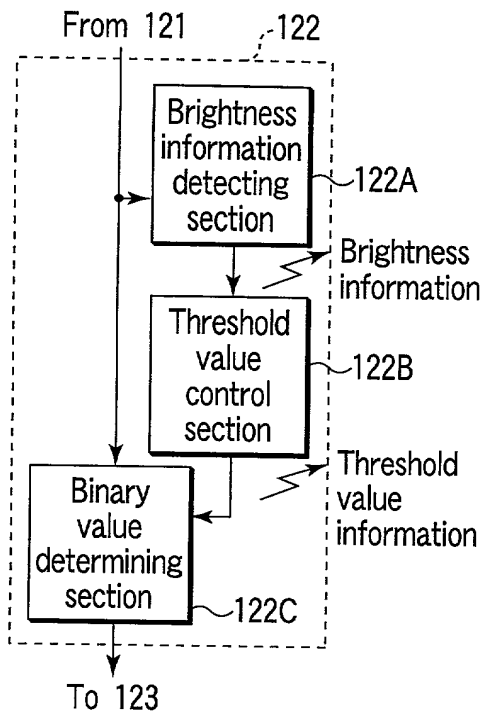


FIG. 15

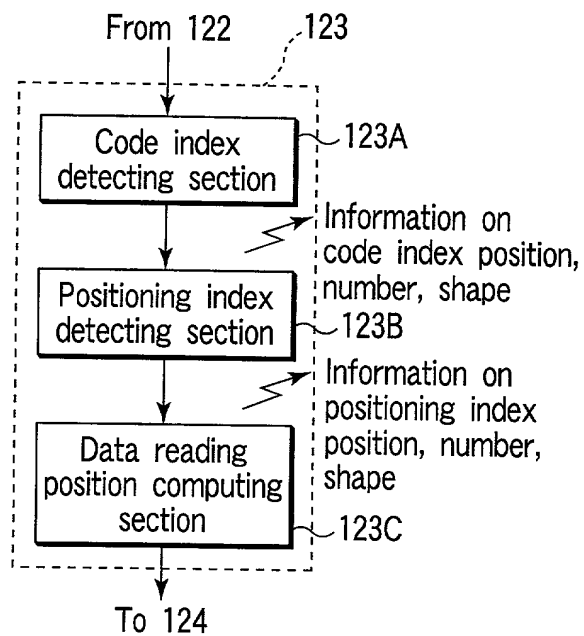


FIG. 16

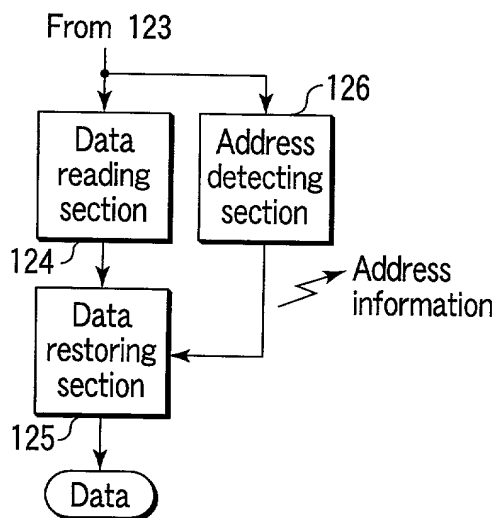


FIG. 17

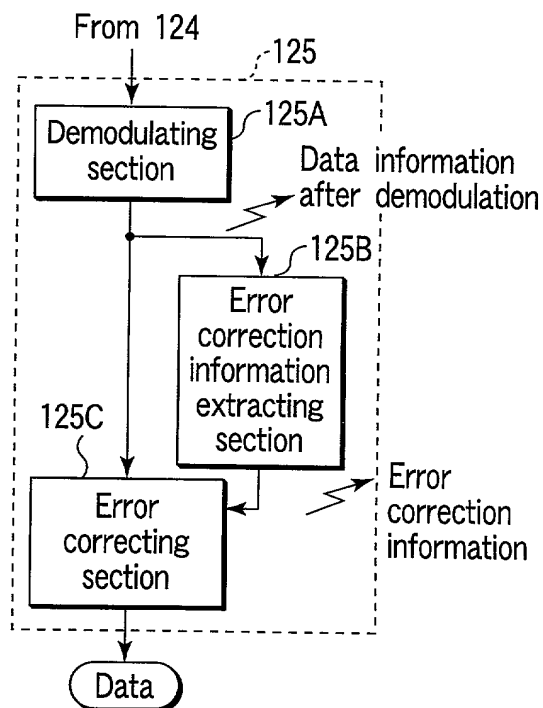
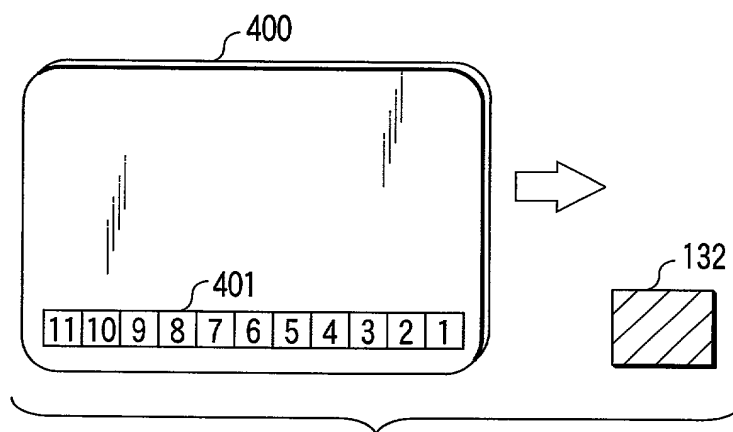
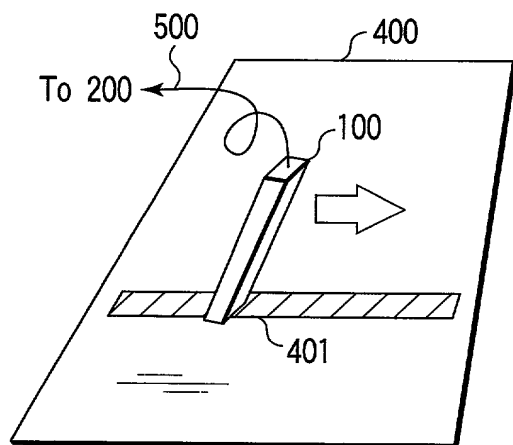
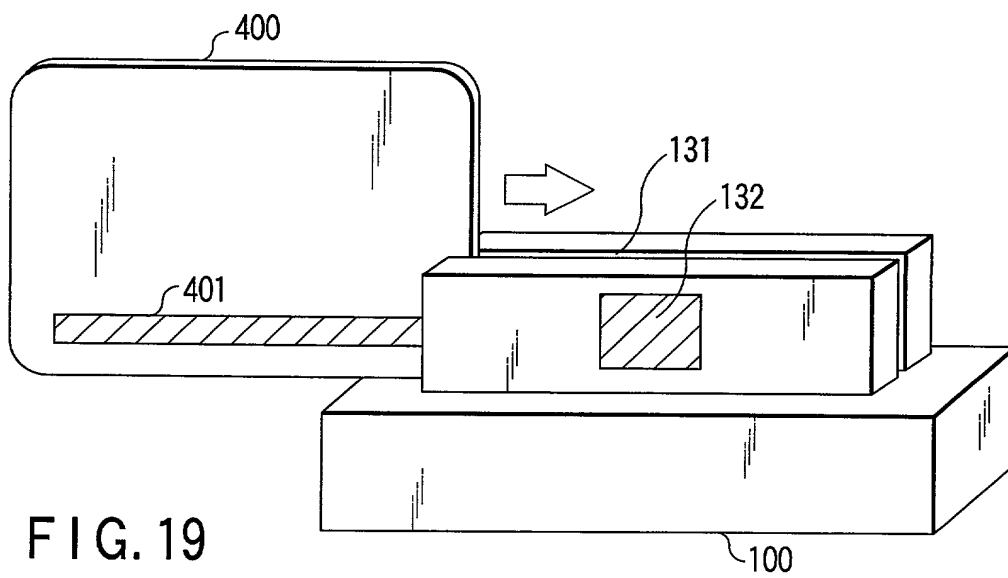
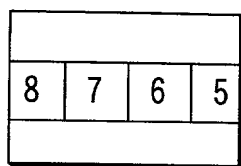


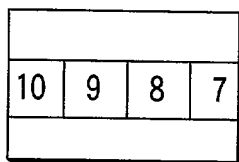
FIG. 18





Picked up image

FIG. 22



Picked up image

FIG. 23

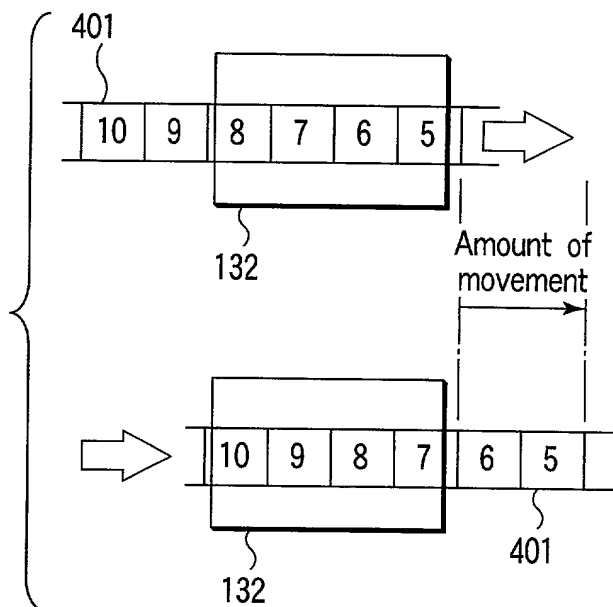
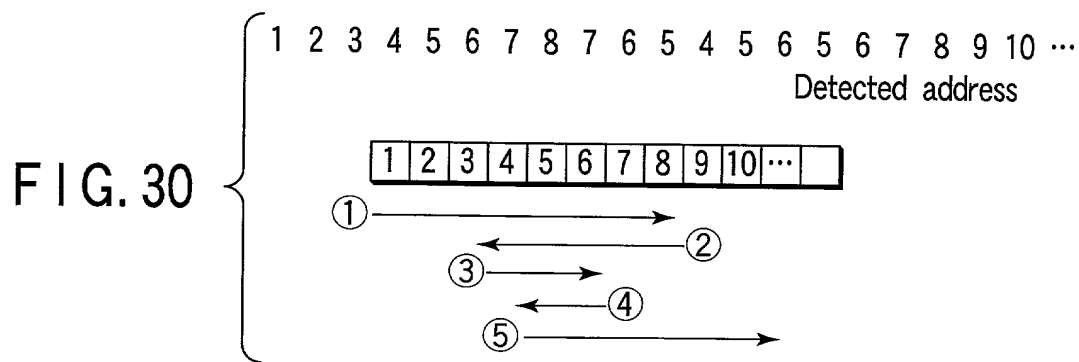
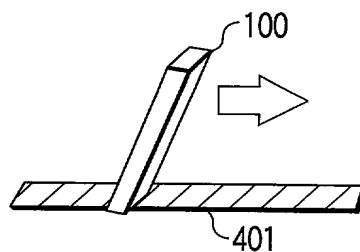


FIG. 24

FIG. 25



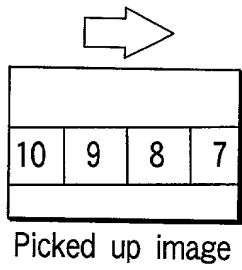


FIG. 26

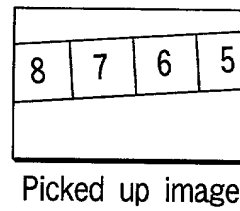


FIG. 27

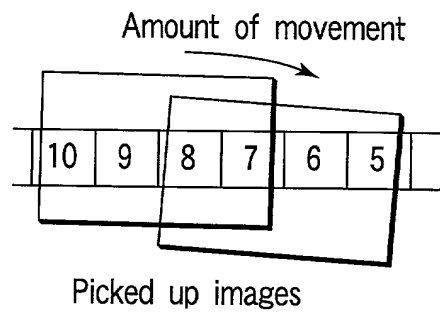
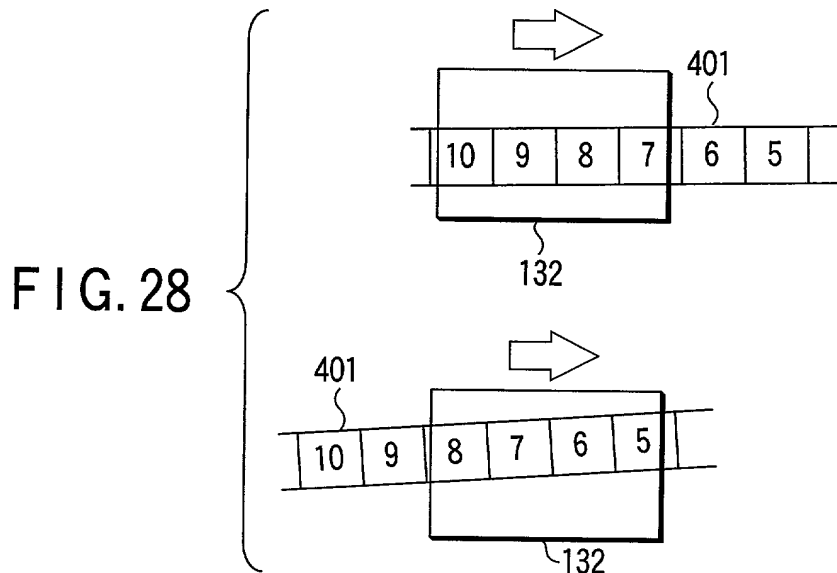


FIG. 29

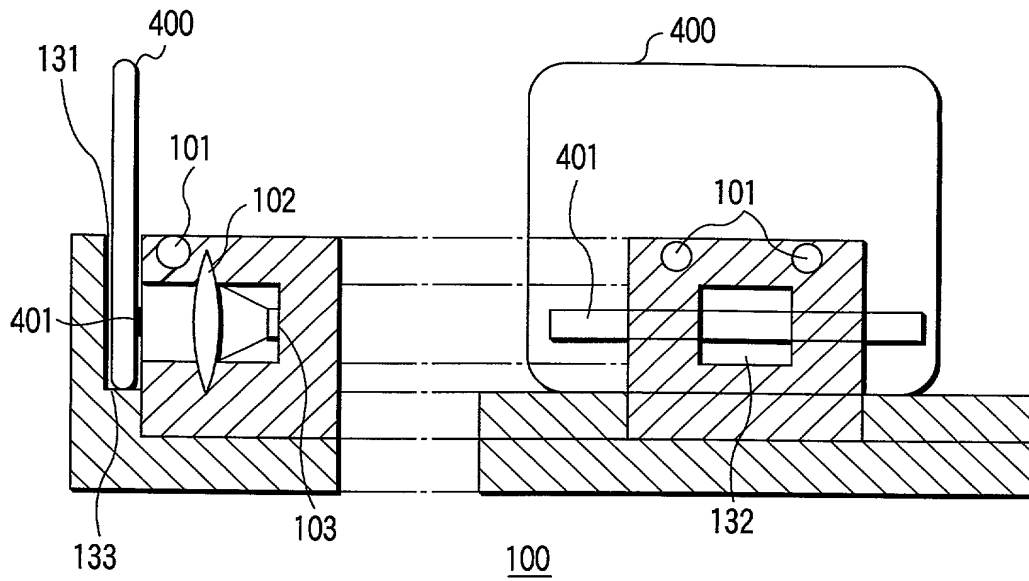
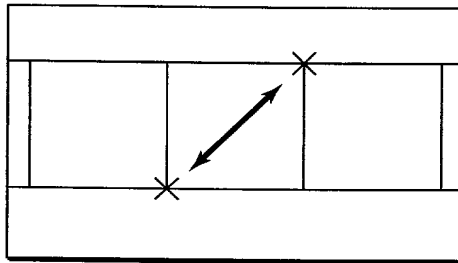
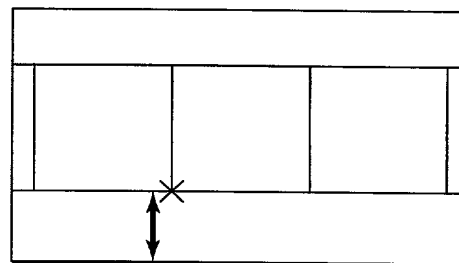


FIG. 31



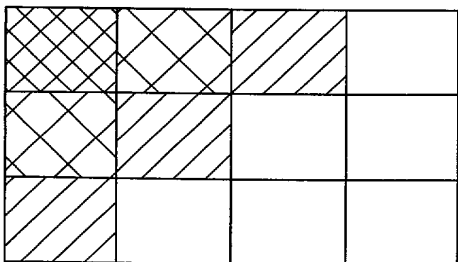
Parameter relating to
lens magnification

FIG. 32



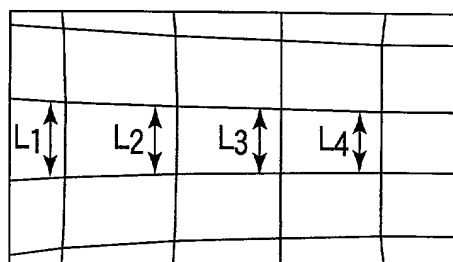
Parameter relating to
guide position

FIG. 33



Parameter relating to
lighting condition

FIG. 34



Parameter relating to
distortion

FIG. 35

Detected information	Acquired parameter	Parameter relating to code reading operation	Parameter relating to way of reading code	Parameter relating to recording medium	Parameter relating to code reading apparatus
Environment information	Reading environment (temperature; humidity; time; position; atmospheric pressure)	<input type="radio"/>			<input type="radio"/>
	Power supply rising time; supply voltage				<input type="radio"/>
	Maximum brightness (suspension, tilt; lighting intensity, sensor sensitivity; reflectivity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Minimum brightness (suspension, tilt; lighting intensity, sensor sensitivity; reflectivity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Average brightness (suspension, tilt; lighting intensity, sensor sensitivity; reflectivity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Brightness distribution (suspension, tilt; lighting intensity, sensor sensitivity; reflectivity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Average brightness of predetermined region	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Ratio of maximum brightness/minimum brightness (density)			<input type="radio"/>	
	Brightness of code components	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

FIG. 36A

Code data information	Data reading positions				
	Number of black dots, number of white dots	Black/white ratio			
Demodulated data information	Data length				
	Number of read blocks				
	Number of 1s; number of 0s				
Error correction information	1/0 ratio				
	Number of corrected errors (missing data)				
Restored information	Positions of corrected errors				
	ID; producer; type of information				
	Recording time; amount of data				
Relative movement information	Moving speed				
	Moving direction				
	Number of movements				
	Meandering				
	Time spent from command input to shooting of code at predetermined				

○ represents particularly effective parameter

FIG. 36C

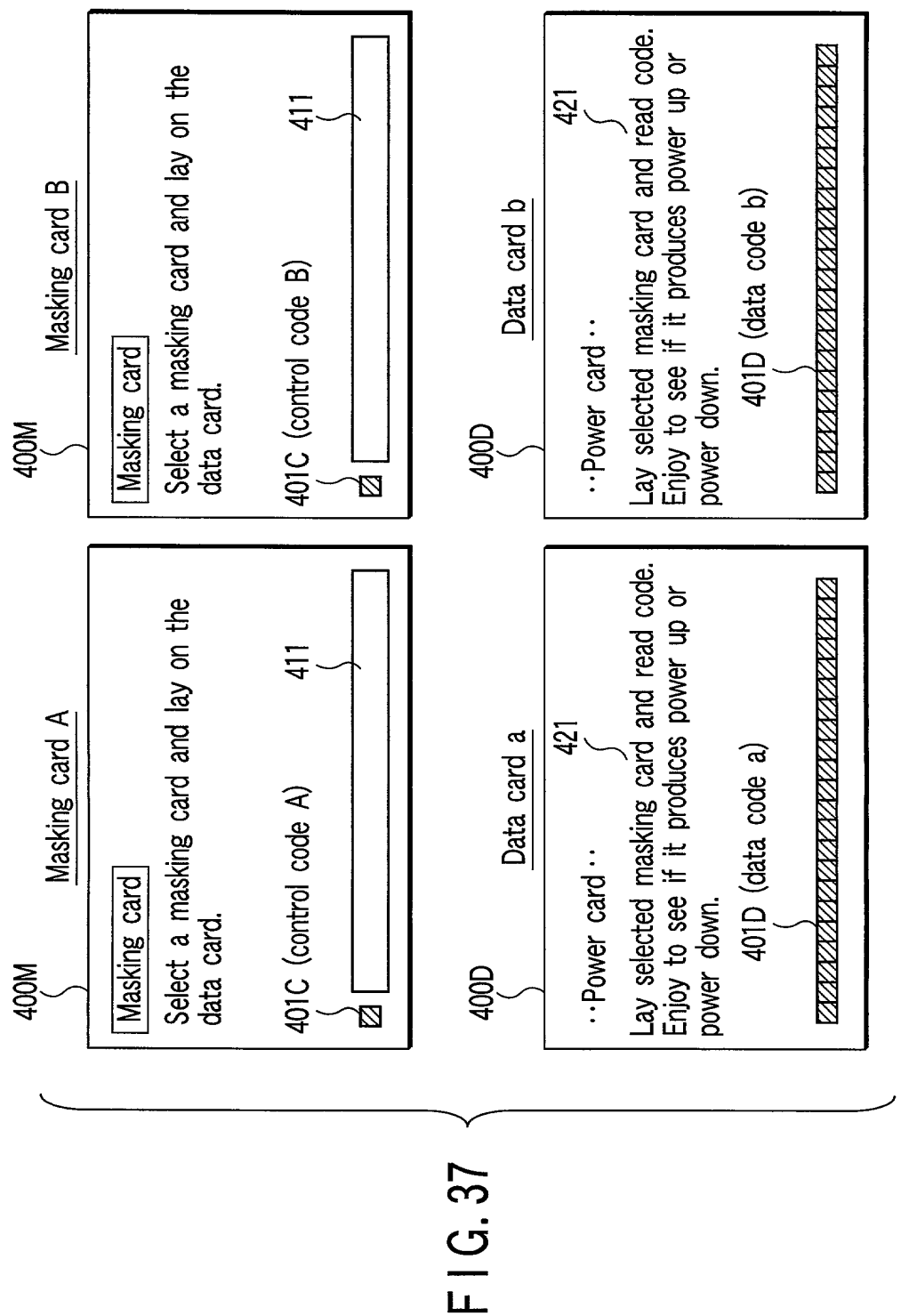


FIG. 38

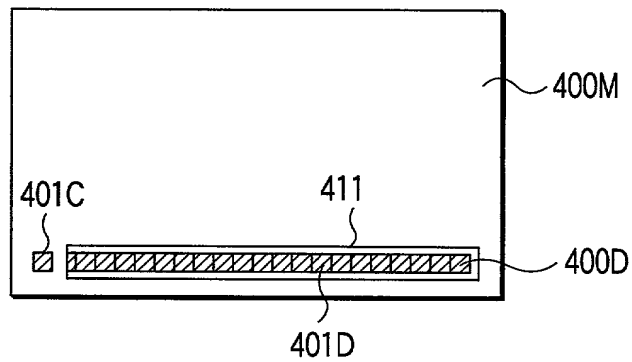


FIG. 39

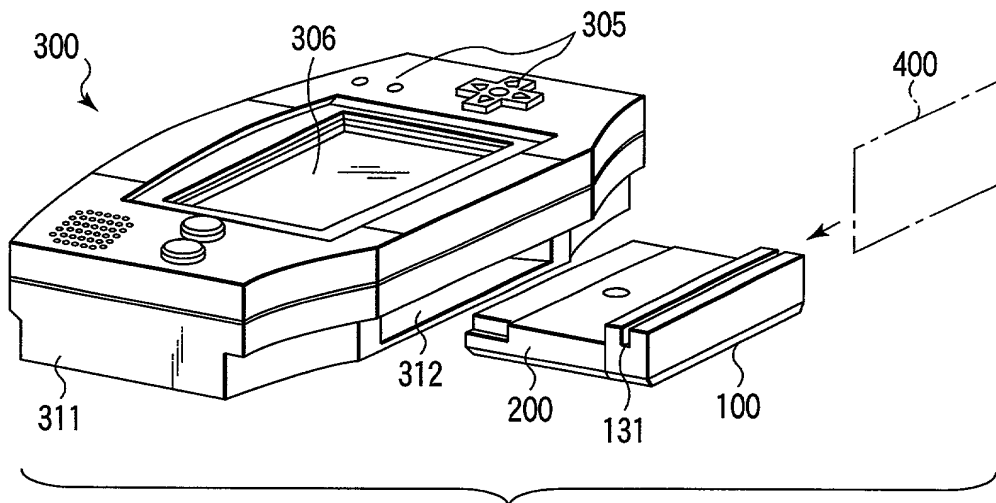
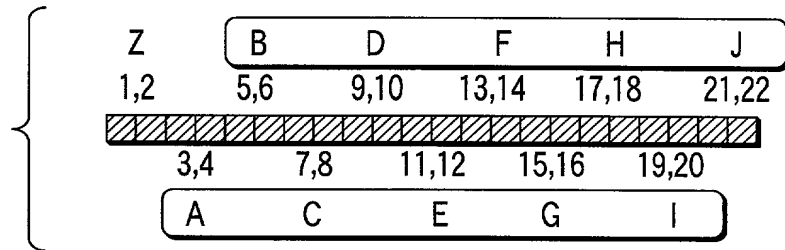


FIG. 40

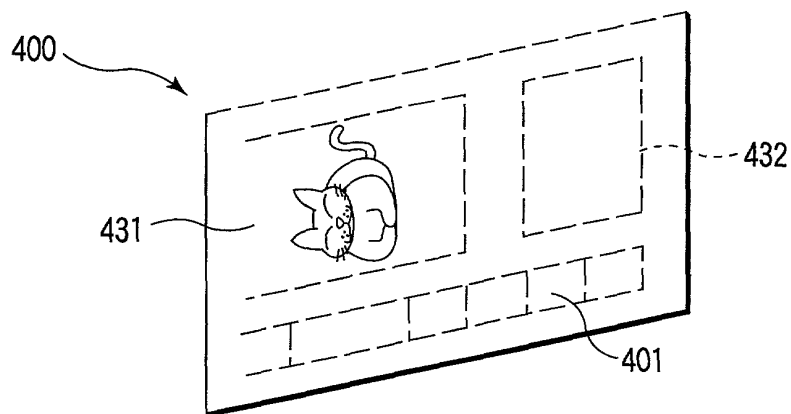


FIG. 41

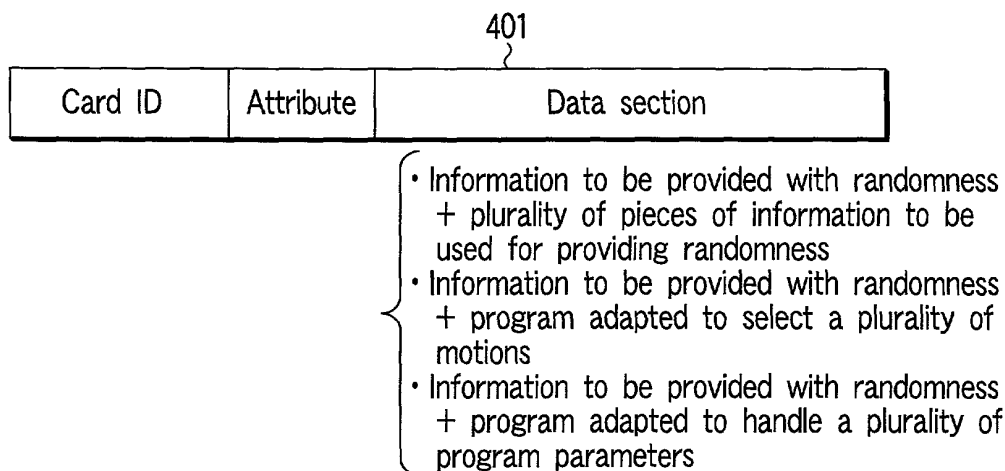


FIG. 42

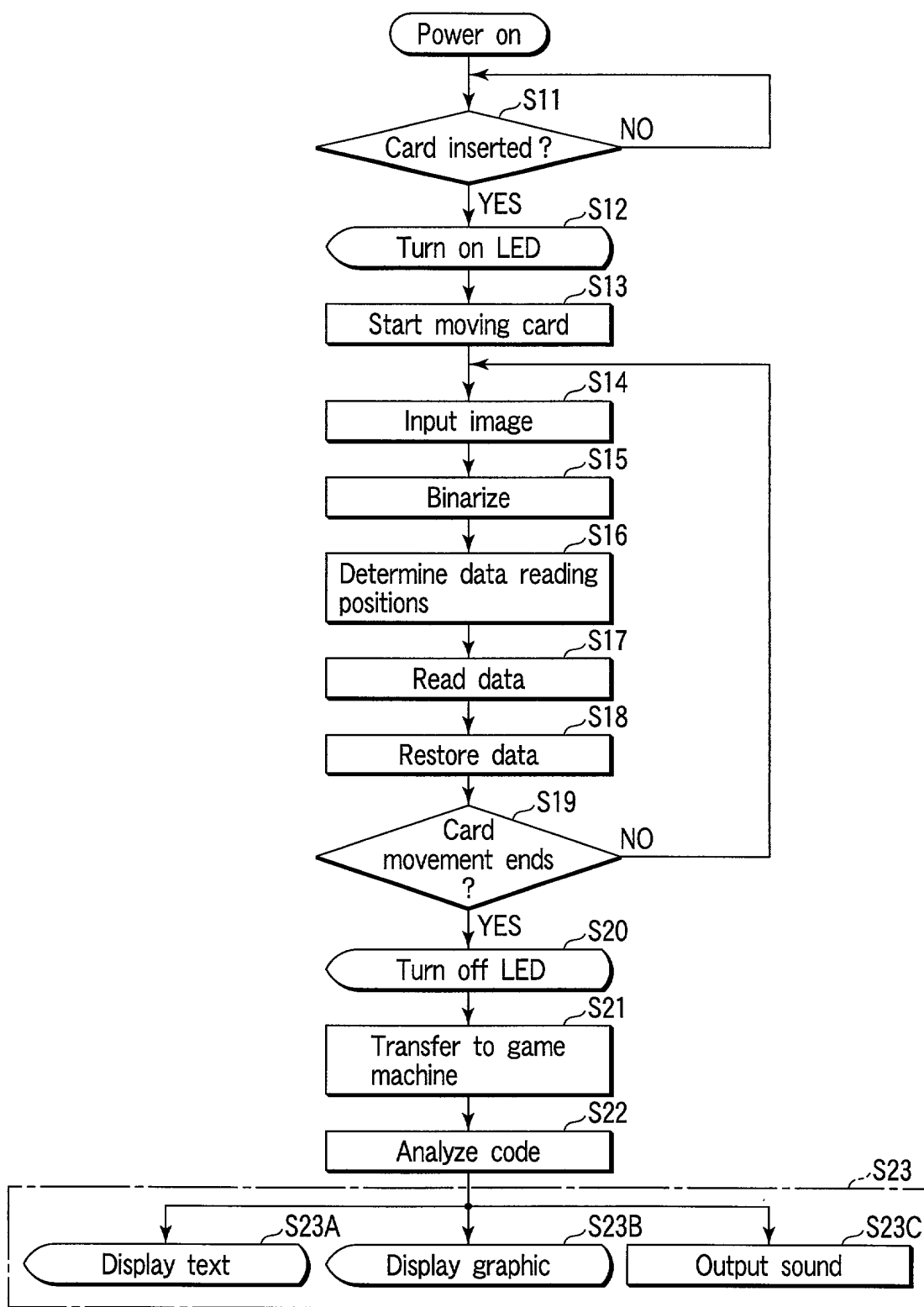


FIG. 43

FIG. 44

Error rate [0]
Animation pattern [0]
Error rate [1]
Animation pattern [1]
⋮
Error rate [n]
Animation pattern [n]

201(202)

Speed

1~10

11~20

21~30

31~40

⋮

70
20
60
50
⋮

201

FIG. 44

FIG. 50

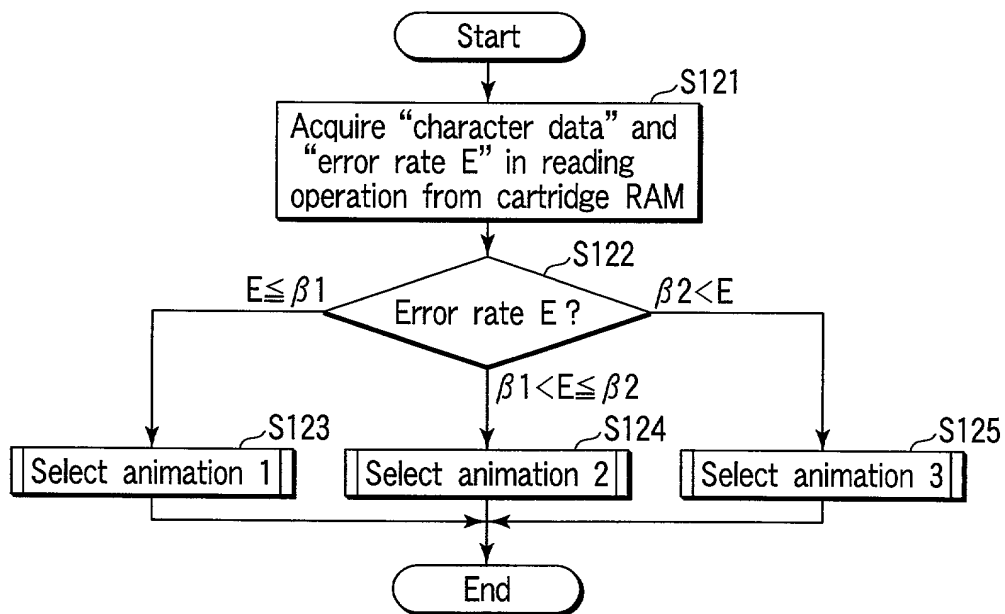


FIG. 46

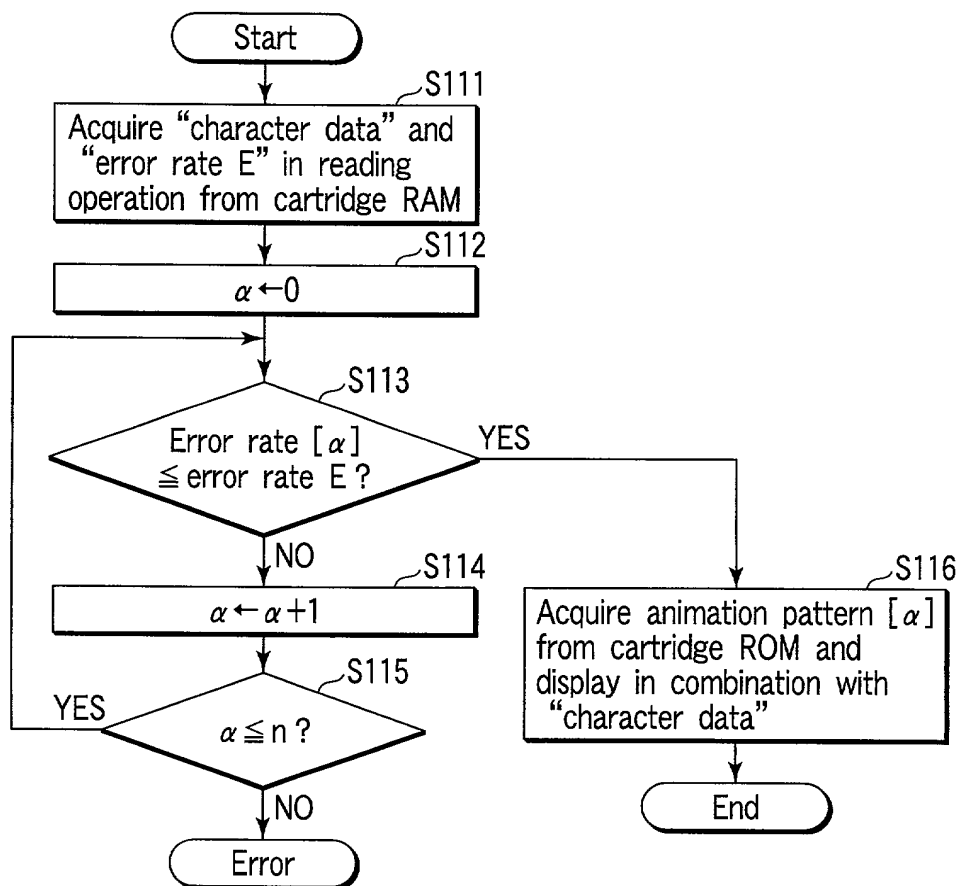


FIG. 45

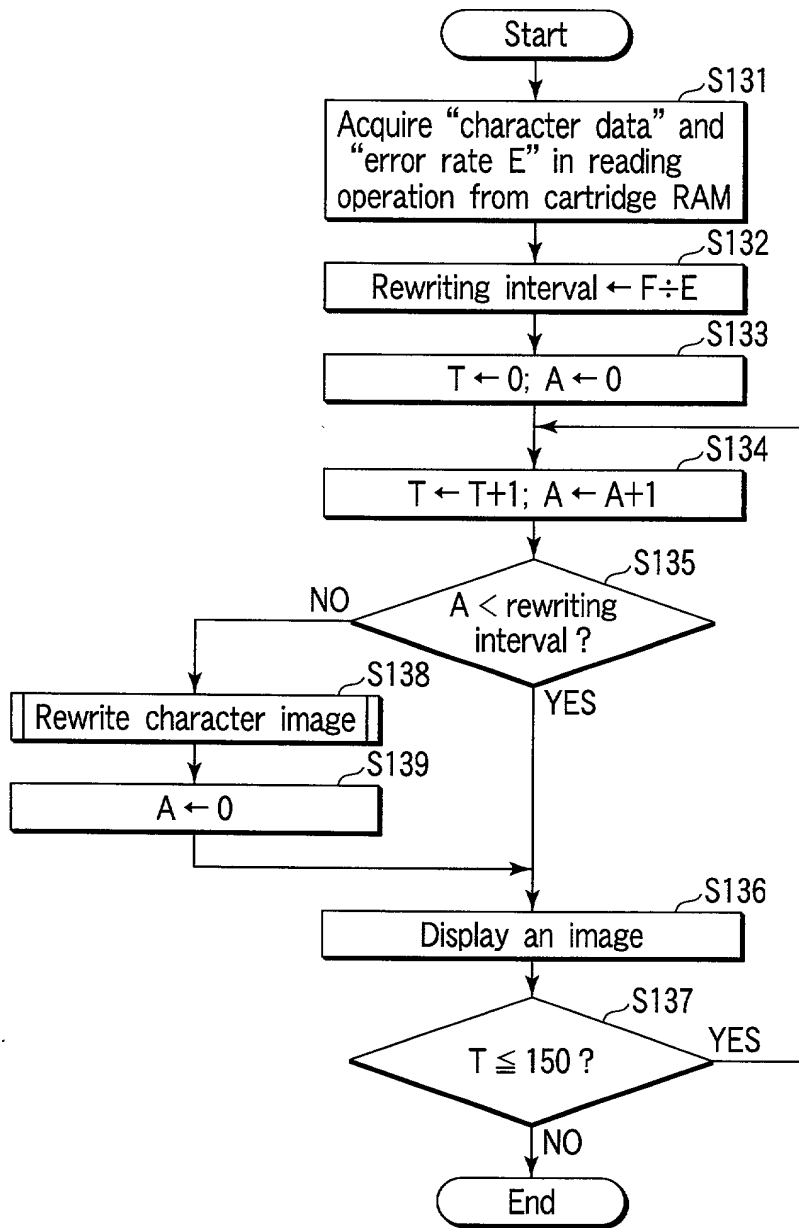


FIG. 47

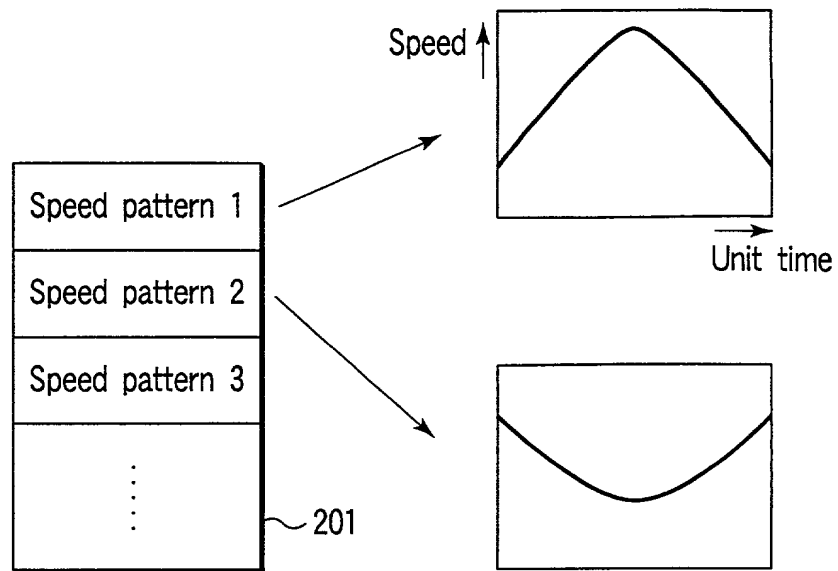


FIG. 48

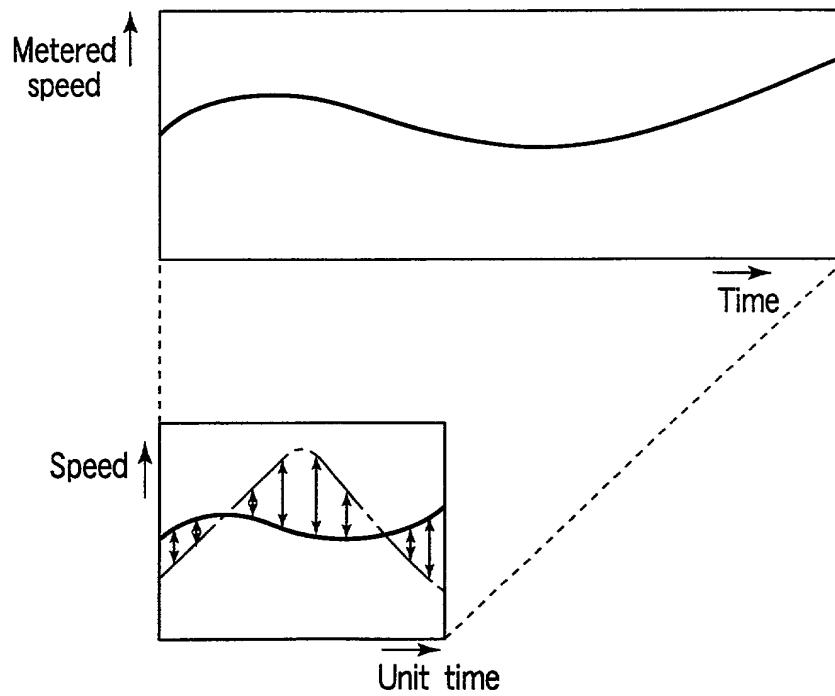


FIG. 49